



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,281	12/09/2003	Gon Kim	9988.095.00-US	2549
30827	7590	08/30/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006				PATEL, RITA RAMESH
ART UNIT		PAPER NUMBER		
		1746		

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/730,281	KIM ET AL.	
	Examiner	Art Unit	
	Rita R. Patel	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22,26-29 and 32-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-22,26-29 and 32-40 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 June 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/28/06</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

The replacement drawing sheets were received on 6/20/06. These drawings are accepted.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that **the abstract not exceed 150 words** in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

Prior claim objection to claim 29 has been withdrawn.

Claim Rejections - 35 USC § 112

Prior 35 USC § 112 rejections on claims 1-14, 16-17, 32, and 38-40 have been overcome.

Response to Amendments / Arguments

This Office Action is responsive to the amendment filed on 6/28/06. Claims 1-40 have been previously canceled without prejudice; and claims 23-25 and 30-31 have been canceled. Claims 1-22, 26-29, and 32-40 are pending. Claims 1, 4, 7, 11, 15-17, 29, 32-35, and 38 have been amended. Applicant's arguments have been considered, but are not persuasive. Thus, claims 1-22, 26-29, and 32-40 are finally rejected for the reasons of record.

Re claims 1, 7, and 15, applicant claims Smith fails to fully disclose the features in these claims; specifically, applicant states that space tub 40 of Smith fails to anticipate applicant's claims of a bearing housing of sleeve form inserted in the tub rear wall. However, as illustrated in Figure 2 of Smith, the space tube 40 is clearly illustrated below the tub 3, connected between the upper and lower bearing frames 32, 33; such bearing frames read on applicant's limitation for a tub rear wall, as such frames form a support wall therebelow the tub 3, which are connected to the bottom of the tub as seen in Figure 2 of Smith; thus the space tube 40 is inserted in a tub rear wall.

Furthermore, applicant argues that screw 71 is not a stator fastening part of a bearing housing, and rather, as illustrated in Figure 5, Smith discloses that screw 71 fixes a short cylinder 70 to the upper frame 32. However, although a short cylinder 70 is fixed to the upper frame 32, it still is taught by Smith that there are stator fastening holes formed in the stator fastening parts of the bearing housing. The lower part of the frame 33 includes holes where screw 71 is fixed therein, whereby the lower screw 71 holds lower frame 3 in place, and thus allow the interference fit 36 at the corner of the stator

Art Unit: 1746

25 to effectively hold the stator in place. Although screw 71 is not inserted directly into a perforation into the stator, the screw in the lower frame 33 is used for securing the lower frame and the stator; hence, holes formed by screws 71 read on applications limitations for stator fastening holes in the stator fastening part of the bearing housing, as the lower frame 32 reads specifically on applicant's claim of a stator fastening part. Thus the Office maintains its rejections upon claims 1, 7, and 15 and dependent claims thereof.

Applicant's contest that Smith fails to anticipate or render obvious the combination features recited in at least claims 4, 11, and 27, however, as priorly taught in the previous Office Action, screw 71 is used to fix the stator to the bearing housing and it would be obvious to one of ordinary skill in the art to affix multiple screws thereupon for holding the stator to the bearing housing to achieve a stronger, more reinforced hold. It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced, *In re Harza*, 124 USPQ 378 (CCPA 1960). Applicant has not provided any new or unexpected result of having more than three fastening holes therein, as taught to be an obvious variant of Smith. Therefore, the Office maintains its rejections on claims 4, 11, 27, and any dependent claims thereof.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 15, 16, 18-20, 26 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US Patent No. 5,266,855) herein referred to as "Smith".

Smith discloses an electric motor for a clothes washing machine; the motor includes a stator 25 held outboard of a frame carrying bearings 38, 39 in which a shaft 11 rotates, the shaft carrying the rotor 15 outboard of the stator 25 (Abstract). A water container 3 is suspended within the cabinet 1 by suspension rods 4 and springs 5 (col. 4, lines 50-51). Said water container is preferably an injection molding (col. 5, lines 42-43); an injection molding may include plastics, hence reading on applicant's claim for a plastic tub. Contained within the water container 3 there is a perforated spin tub 6 and within the spin tub is an agitator 7 (col. 4, lines 58-60) connectively attached for driving the spin tub. The spin tub 6 comprises of a stainless steel perforated hollow cylinder 45 fixed to a plastic extruded base 46 (col. 6, lines 4-5). This satisfies applicant's claim wherein the tub is injection molded.

Additionally, Smith teaches bearings 38, 39 which are held in place by mountings 27, 28 positioned in a space tube 40 used for supporting the drive shaft 11 (col. 5, lines 63-65). The space tube reads on applicant's claim of a bearing housing have a sleeve

Art Unit: 1746

form of bearing supporting part. The stator 25 and rotor 15 are mounted on the rear wall of the water container 3, as seen in Figures 1, 2 and 5 of Smith, such that the rotor securing screw 92 and bolt 41 are used to hold the rotor-stator assembly within the unit and screw 71 fixes the upper and lower bearing frames 32, 33 in place, for supporting the rotor-stator assembly thereunder. The stator and rotor are taught by Smith to be mounted on the rear wall because they are located on the wall opposite the lid; the lid would be located on the top of the apparatus as seen in Figure 1, hence the rear wall would be the bottom wall of said apparatus. The stator is formed as an annular helical yoke edgewise wound from a strip of material, whereby the strip is edgewise wound about pole pieces coinciding in stacked groups to form a plurality of poles arranged at equally spaced intervals extending radially outwardly from the outer face of the yoke (Abstract); the pole pieces read on applicant's claim for tooth portions that may be welded parts of the stacked layers. Smith further discloses that the insulation for windings on the poles of the core consists of a top insulating molding 22 and bottom insulating molding 23 whereby the windings are wound about the moldings of each pole. The core of the stator 25 comprises a strip of magnetic material, preferably a silicon steel alloy or other low hysteresis steel (col. 5, lines 21-23), which reads on applicant's claim wherein the helical type core is from steel.

Re claims 18-20, Smith diagrams in Figure 9 the stator 25 having equidistant extensions protruding radially, whereby the poles 8 form an perpendicular extension; this reads on applicant's claim wherein the stator includes an extension in an outward radial direction from the cylindrical bearing support part, having steps along the radial

direction at preset intervals and the fastening part includes alternate outward radial direction extensions connectively arranged perpendicular to the extensions. Additionally it can be seen in Figure 9 that the steps in between the equidistant extensions are shaped rectangular-like and/or trapezoidal-like.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-6, 8-14, 17, 21-22, 27-29, 32-37, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claims above.

Claims 2, 5, 8 and 12 are rejected appropriately under claims 1, 4, 7 and 11. Smith discloses the claimed invention except for an explicit specification of the height ratio of the fastening part to the total stack height. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the fastening part of the apparatus such that the height is an optimal value for performing durable and effective fastening functions. Since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 3, 6, 9, 10, 13, 14, 21-22 and 29 are rejected appropriately under claims 1, 4, 7, 11, 15 and 27. Smith discloses it would be preferable to produce the bearing

Art Unit: 1746

frames 32, 33 from the same mold or set of dies to ensure the bearing moldings are concentric with locating pins or dimples S4 and corresponding holes 35 at the periphery of the frames, and also that the external angle 36 in which the inner corner 37 of the stator 25 fits with an interference fit (col. 5, lines 54-58). Although Smith does disclose teaches fastening the bearing frame with locating pins or dimples into corresponding holes, Smith does not expressly disclose using a spring pin, a metal tube press fit, a boss, a rivet, ribbed fastening part or circumferentially ribbed fastening part for fastening said apertures. However, it would have been an obvious equivalence to one having ordinary skill in the art at the time the invention was made to use spring pins, metal tube press fits, bosses, rivets, ribbed fasteners or circumferentially ribbed fasteners for fastening since applicant has not shown that spring pins, metal tube press fits, bosses, rivets, ribbed fasteners or circumferentially ribbed fasteners have a criticality. It appears that the invention would perform equally well with other fasteners and the selection of any of these known equivalents to provide fastening functions would be within the level of ordinary skill in the art.

Claims 4, 11 and 17 are rejected appropriately under claim 15 and recitation of Smith as shown above, Smith discloses the claimed invention except Smith fails to teach three or more than three fastening holes projected toward an inside of the helical type core for fastening the stator to the bearing housing. As aforementioned, screw 71 is used to fix the stator to the bearing housing and it would be obvious to one of ordinary skill in the art to affix multiple screws thereupon for holding the stator to the bearing housing to achieve a stronger, more reinforced hold. It is well settled that the mere

Art Unit: 1746

duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 124 USPQ 378 (CCPA 1960).

Re claims 27, 28, 32-37 and recitation of Smith as shown above, Smith discloses the claimed invention except Smith fails to explicitly teach a weight heavier than 1.5 kg for the stator for mounting on the stator fastening part of the bearing housing. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to establish an optimal weight requirement for the stator to achieve appropriate immobility of the stator since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 39 and 40 are rejected appropriately under claim 38 and recitation of Smith as shown above, Smith discloses the claimed invention except Smith fails to explicitly teach the material of the base 29, located in between the water container 3 and the spin tub 6. See Figure 1. The base 29 is used as a support by means of support columns 30 reinforced with stiffening webs 31 (col. 5, lines 43-44). However, it would be obvious to one of ordinary skill in the art at the time of the invention to use a metal material for base 29, as Smith clearly delineates the bearing frames and spin tub within the apparatus may be made of metal (col. 5, lines 47-48; col. 6, line 4); metal is a commonly known material in the art for making components of washing apparatuses. Additionally, Smith's aforementioned teaching of the injection molded tub combined with the disclosure of base 29 located directly below the tub, as shown in Figure 1, teaches

Art Unit: 1746

applicant's claim wherein the tub is injection molded in a state where the tub supporting plate is buried in the tub.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RRP



MICHAEL BARR
SUPERVISORY PATENT EXAMINER